Message

From: Strynar, Mark [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5A9910D5B38E471497BD875FD329A20A-STRYNAR, MARK]
Sent: 10/5/2017 7:33:28 PM
To: Leung, Lam-Wing H [LAM.H.LEUNG-1@chemours.com]
Subject: RE: some interesting samples

If it is from my 2015 ES&T paper we did not propose a structure or a CAS# as we could find neither at the time. Then I got Scifinder access. When I go to Scifinder and put in that formula I get 7 potential structural isomers (that are carboxylic acids) and one acid fluoride (which it is not). In any event that compound was very minor player. In any event I really do not know which one it was. Perhaps one of your chemists can pick the most likely structure.

Mark

Here are the CAS#s for the C8H F15O3 from Scifinder:
1818372-49-4
1802208-72-5
919005-55-3
504435-11-4
174767-06-7
107819-31-8
336-20-9

From: Leung, Lam-Wing H [mailto:LAM.H.LEUNG-1@chemours.com]
Sent: Thursday, October 05, 2017 3:08 PM
To: Strynar, Mark <Strynar.Mark@epa.gov>
Subject: RE: some interesting samples

Hi Mark,

Thanks for the info and I'm still guessing that it's likely a sulfate or carboxylate salt. By the way, I'm looking at the "Table 3 compounds" that DEQ has been asking us to analyze and I noticed that there is a monoether PFECA listed as C8HF15O3 which does not have a CAS # and I'm wondering what the exact structure is (I understand that they put to list together based on your publications/findings). Reason for the question is we can get almost all the PFECAs from Synquest or Aldrich but this is the one we don't have. Thanks for your help.

Best Regards,
Lam

From: Strynar, Mark [mailto:Strynar.Mark@epa.gov]
Sent: Thursday, October 05, 2017 3:02 PM
To: Leung, Lam-Wing H <LAM.H.LEUNG-1@chemours.com>
Subject: RE: some interesting samples

FYI,

The white precipitate is not soluble in methanol, dichloromethane or acetone. Appears not to be organic in nature Only thing that worked was in 2.5 M NaOH. Could have been soluble in a lower molarity NaOH but that is what I had.

Mark

From: Leung, Lam-Wing H [mailto:LAM.H.LEUNG-1@chemours.com]
Sent: Wednesday, October 04, 2017 3:27 PM
To: Strynar, Mark <Strynar.Mark@epa.gov>
Cc: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; McCord, James <mccord.james@epa.gov>; Lang, Johnsie <lang.johnsie@epa.gov>
Subject: RE: some interesting samples

Mark,

We've only started to look at the Common Waste Tank sample but we did not observe any noticeable white precipitate as we only neutralized the sample (we're in the process of starting oure SPE prep so we'll find out). As for the white precipitate, we've seen some in the past from other samples and I can only speculate that it's some type of carboxylate or sulfate salt that precipitate out at lower pH. My suggestion is if you have FTIR available, it should be able to tell you what it is, potentially. I'll let you know when we start doing the SPE (hence lowering the pH) and see if we observe the same thing.

Regards,
Lam

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From: Strynar, Mark [mailto:Strynar.Mark@epa.gov]
Sent: Wednesday, October 04, 2017 1:16 PM
To: Leung, Lam-Wing H <LAM.H.LEUNG-1@chemours.com>
Cc: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; McCord, James <mccord.james@epa.gov>; Lang, Johnsie <lang.johnsie@epa.gov>
Subject: some interesting samples

Lam,

From the site visit back on September 18th I got some samples I was not sure what to do with. I usually spike with a 50:50 mix of nitric acid:DI water to adjust the pH to around 1.0 or so for processing on an Oasis WAX SPE cartridge and to prevent algae/microbial growth. I had 4 samples I am not sure if you received that had a very high pH:
Deg Tank (pH 12.0)
Common Waste Tank (pH 12.0)
Hydrolysis Sump (pH 12.0)
Alkaline waste Tank (pH >14.0)

When I acidified the Deg Tank, Common Waste Tank and Hydrolysis Sump a white precipitate formed in the water. It filtered out but I have no idea what it is. Do you?

Also the pH of the alkaline Waste Tank did not respond at all to 3x nitric acid spikes so I gave up on it.

Here is a photo of the white ppt in solution and on a filter media (Glass fiber filter).

Mark

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